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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,457

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Markus Schubert

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EXAMINER

ZIMMER, ANTHONY J

ART UNIT

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1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,457	Applicant(s) SCHUBERT ET AL.	
	Examiner ANTHONY J. ZIMMER	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/11/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following: There are several pages missing from the specification as presented. Many more examples are presented in the German language PCT specification than are present in the instant English language specification presented to the Office, and in Examples 5 and 6 on page 7 (the last page of the received specification), Table 2 is referred to but cannot be found.

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Example 14. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, in step (b) it is indefinite what is being "dried and heat-treated" and in step (c) it is indefinite what is being "impregnated" and "dried again". All dependent claims are rendered indefinite as a result.

Claims 5 and 15-17 recite the limitation "the catalyst blank obtained." There are insufficient antecedent bases for this limitation in the claims.

Claims 8-10 recite the limitation "the carbonyl compound." There are insufficient antecedent bases for this limitation in the claims.

Claim 11 recites the limitation "the hydrogenation." There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the hydrogenation reactor charged with the catalyst." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 13-20 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mizobuchi (US2003/0195115).

In regard to claims 1-4, 6, 13-14, and 18-20, Mizobuchi teaches a catalyst comprising rhenium and platinum in amounts within the range of the claim (see Table 1) on a titania support. The catalyst is prepared by a process similar to the process of the instant claims and having the same structural implications in which a rhenium compound is impregnated on the support followed by drying. Then a platinum compound is impregnated and the catalyst is dried again. See [0032]-[0035]. Subsequently, the catalyst is reduced in an atmosphere containing hydrogen and carbon monoxide at 500°C. See [0040]. Though the reduction step in Mizobuchi is carried out after both impregnations, the sequence of reduction in Mizobuchi would have the same structural effect as the instant process of reducing the rhenium compound. See MPEP 2113. Though it is not mentioned in claim 1 that the platinum compound is reduced, the claim does not exclude elemental platinum, a step of

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reducing a platinum compound, or the structural effects implied therein. Claims 6 and 18-20 also provide a step of reduction which would reduce the platinum compound. The reducing step of Mizobuchi mentioned above also satisfies the structural implications of these claims (6 and 18-20). Thus, all of the structural limitations of the instant claims of providing a supported rhenium/platinum catalyst are considered to be met by Mizobuchi.

In regard to claims 5 and 15-17; passivation with an oxygenous gas before impregnation of the platinum compound does not imply any structural differences to the final product catalyst that would distinguish such a catalyst from that of Mizobuchi. Though such a process provides advantages to the process from an economical standpoint (see instant page 4, lines 6-9), the end product of rhenium and platinum on support (provided by separate impregnation and having the impregnation steps separated by drying) is affected by the process of Mizobuchi, even though this passivation step is not included. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. See MPEP 2113.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizobuchi, as applied to claim 1 above, in view of WO'338 (All references will be to the English language equivalent Fischer (US2003/0114719)).

In regard to claims 7-12, Mizobuchi teaches the catalyst of claim 1, see above, but does not teach a the process as required by claims 7-12. However, it would have been obvious to one of ordinary skill in the art to use the rhenium/platinum catalyst of Mizobuchi to prepare alcohols by hydrogenating carbonyl compounds because the use of rhenium/platinum catalysts in this regard is well known, as in WO'338 (see claim 1 in Fischer '719). Thus it would have been obvious to one of ordinary skill in the art to use the platinum/rhenium catalyst of Mizobuchi in such a process (the process of WO'338) in order to affect the predictable result of hydrogenating carbonyl compounds to alcohols.

WO'338 teaches carbonyl compounds required by claims 8-10, see [0030] of equivalent. WO'338 teaches liquid hydrogenation (over solid catalysts) at 50-250°C and 3-330 bar, see equivalent [0029], and starting up the reactor charged with catalyst using dilute aqueous solution of the carbonyl compound, see equivalent [0048].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bazin et al. "Bimetallic Reforming Catalysts: EXAFS Investigation of the Particle-Growing Process during the Reduction Step" and Bazin et al. "EXAFS Studies of Bimetallic Pt-Re/Al₂O₃ and Pt-Rh/Al₂O₃ Catalysts In the First Stages of Preparation, Drying, and Calcination" both describe a process of separately impregnating rhenium and platinum, see the Experimental Sections in both.

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Pavlikhin et al. also discloses effects of the production conditions on the catalytic properties of platinum-rhenium catalysts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. ZIMMER whose telephone number is (571)270-3591. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ajz

/Steven Bos/
Primary Examiner, Art Unit 1793